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System-to-Intermediate System - ISO 10589) provides one example of another link-state routing protocol in which, like OSPF, cluster id's are currently assigned on a per-interface basis and to which methods embodying the invention can be applied. With IS-IS, multiple cluster id's can currently be assigned to one interface, so that a node can be a member of more than one cluster

5 via the same IS-IS interface. For the purposes of methods herein, such an IS-IS interface for more than one cluster can be considered as a set of interfaces, one for each cluster, so that the comments herein relating to operation with OSPF apply equally to IS-IS. Moreover, it is to be understood that, in general, where features are described herein with reference to a method embodying the invention, corresponding features may be provided in apparatus embodying the

10 invention, and vice versa.

Preferred embodiments of the invention will now be described, by way of example, with reference to the accompanying drawings in which:

Figure 1 illustrates a simple example of a PNNI network to which reference will be made in explaining operation of embodiments of the invention;

15 Figure 2 illustrates a simple example of an OSPF network to which reference will be made in explaining operation of the embodiments;

Figure 3 is a schematic block diagram of a device embodying the invention for connection as a node in an ad hoc network system;

20 Figures 4a to 4c illustrate various methods of communicating cluster control information in embodiments of the invention;

Figure 5 illustrates communication of cluster control information in Hello messages transmitted between nodes on establishment of a connection;

Figure 6 is a flow chart illustrating one embodiment of a cluster control process performed by a node;

25 Figure 7 illustrates operation of the cluster control process between two nodes on establishment of a connection; and

Figure 8 is a flow chart illustrating another embodiment of the cluster control process performed by a node.